

Study on Collaborative-Learning using Cloud Technologies

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Abstract— This paper explored various opportunities exists in Cloud by bringing the technology to campuses, by saying goodbye to the traditional class rooms and hello to a whole new world of Collaborative learning (Co-learning). Learn by interacting not just with faculty at your colleges, but also with experts of different universities. Practice your concepts in the machine room supported by your college/university. Revise lectures and catch up on missed classes with Lesson and brush up on the practical application of concepts, from your place. Or if you prefer studying with friends, uses the group based online learning modules and solve assignments with your class mates. Be a part of the Cloud Campus where studying is nothing like studying.

Index Terms—Traditional Learning, Collaborative-learning.

I. INTRODUCTION

'Collaborative learning' is that it is a situation in which two or more people learn or attempt to learn something together. "Collaborative learning" is an umbrella term for a variety of educational approaches involving joint intellectual effort by students, or students and teachers together. Education is deliberated to be significant for the progress of the mankind. There are quite a lot of arenas of education which are required for the inclusive development of the child, this is the purpose why they are skilled in all the fields right from the early childhood just to make sure that the student is getting the required awareness about the things which had happened in the past and what is happening currently around the world. In various parts of the world it is thorny to organize classes for the students due to climatic and geographical conditions. For few students it is difficult to leave their country for further education due to limited economy. To comfort the students and to nurture their education there are several glob based educational institution that not only provide them edification but also gives a chance to get connected with the skill as well. Cloud based technology is the service which are provided through the web. Rather than having the ease or the software mounted to the system or any other computing device one can have it on the network which can gain access from any part of the world through a computing device with internet connection. There are innumerable benefits of the cloud services which are also considered by the learning institution. With help of the cloud

services one can easily renovate the traditional educational campus into cloud campus thus providing students the Best. This makes the students to effectively learn and understand the concepts easily also enables the students to build and improve inter – personal skills, and positive interdependence.

Some of the salient features of a collaborative learning environment are [2] [3] [4] –

Heterogeneous Grouping – Students, who vary with each other on various parameters, get to work with each other.

Peers Interaction – students get to exchange their ideas with their peers, which generally lead to higher order thinking.

Individual Accountability – every member is encouraged to share his knowledge with other members of the group.

Positive Interdependence – every member, given a chance to share his expertise with others, gets to feel he/she is important; and that everyone together is needed to succeed.

Cooperative Skills – cooperation, rather than competition or isolation, is encouraged among students.

- a. Motivation for Collaboration-Learning using Cloud technology.
- b. Bringing Technology which is magnificently confirmed to the Institutions globally.
- c. Learning should be simple and the way of teaching /interaction should motivate children at all levels.
- d. Everyone should know about cloud and services in cloud.
- e. To educate the students and to make aware of the Collaborative learning methodology.
- f. To find out the willingness towards the implementation of Co-learning.
- g. Collaborative learning is a way of grasping knowledge and technology.
- h. In Collaborative learning Where we can find anywhere lab, Online assessment, Lesson on ultimatum.
- i. Interaction with all the experts in and around the world.
- j.

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The rest of the paper is organized as follows,

- II. Survey on Existing Work
- III. Methodology
- IV. Technology and act of assistance for building co-Learning
- V. Further research and implication
- VI. Conclusions and Future work

II. SURVEY ON EXISTING WORK

Collaborative Learning in E-Learning has been proposed and implemented to enhance the concept of E-Learning Management System (ELMS) [5]. Therein, various service layers such as User Interface Layer, Learning Services Layer and Infrastructure Layer form the backbone of the system. The User Interface provides the Graphical User Interface (GUI) to access various features and services provided by the system. The Learning Services Layer deals with the business logic of those services provided. And the Infrastructure Layer provides the architecture of the system. Internet has been used as the means to link and connect multiple groups spread across wide geographical boundaries. Every group has got several agents including student agent, teacher agent and instructor agent. The student agent assists the learner in accessing the resources available. The teacher agent assists the teacher in providing a wide variety of resources. The instructor agent acts as a mediator between the learners and the teachers facilitating the resources and services provided by the teachers to the learners. Though this forms an effective system, but this doesn't address the dynamics of the ways in which a student can optimize his/her learning. There is a substantial amount of research on the Cloud Campus for students and the researcher stated that cloud computing based solution for building a virtual and personal learning environment which combines a wide range of technology, and tools to create an interactive tool for science education. The proposed environment is intended for designing and monitoring of educational content as well as creating a platform for exploring ideas. The system allows exchange of educational content and integrates different pedagogical approaches to learning and teaching under the same environment [1]. Some author say about to provide cloud storage to store and upload the data for the teachers as study material, Assignments and other stuff. These drives also allow to the principal and Examination cell authorities to upload the current notices for student. The designed cloud storage (Drive) is used within Intranet by using LAN connection and also by using Wi-Fi. The Drive facilitates staff with a separate and limited space to store and upload U-Learning using Cloud Technologies data with its own access privileges. The platform used to implement the idea is Ubuntu. There are three necessary packages required to set up cloud in Ubuntu [6]. The above work they say about Cloud campus is the next generation cloud hosting for higher edification which facilitates the institution to benefit from a entirely secure and scalable virtual infrastructure. Cloud servers can be proven in any combination of sizes and can expand as the needs grow. Campus Cloud offers institution a better way to fully implement systems and software in college

or university without having to go through the struggle of training in-house experts. Campus Cloud services are carried out by highly trained IT professionals who will work with institution to fully realize its technology goals at ease and in most easy on the pocket.

III. METHODOLOGY

Separation training has been used to furnish instructional access to grown-up scratches living in remote zones where accepted training is not accessible. A Collaborative Learning framework is a mainstream innovation for separation instruction. The Collaborative Learning in training framework dependent upon the web models accepted in-individual education by furnishing comparable virtual access to classes, substance, and other resources. It is likewise a social space where scholars and instructor can interface through strung dialogs or talk. There is an assortment of profits to utilize Collaborative Learning system. Learner who has confinements of time and area can take in without anyone else present with the inaccessible taking in framework through Internet innovation at an easier expense and higher quality in worldwide scale. Collaborative Learning framework could be incorporated with a physical taking nature's domain which may be alluded to as mixed taking in. It can occur synchronously then again no concurrently. In synchronous frameworks, members meet continuously and educator's lead live classes in virtual classrooms. Understudies can convey through a mouthpiece, talk rights, or by composing on the board. In offbeat taking in, which is frequently called paced toward oneself taking in, understudies are normal to finish lessons and assignments freely through the framework. Asynchronous courses have due dates as synchronous courses do, yet every person is taking in at his own particular pace. Numerous Collaborative Learning frameworks exist these days that can encourage access to learning in substance and organization. The creator condenses the vital segments normal to Collaborative Learning frameworks in the perspective of its functionalities. The framework comprises of five primary segments, for example, course administration for dealing with the course projects, content administration for dealing with the taking in substance, client administration for overseeing clients and allotting client authorization, correspondence administration to overseeing correspondence assets and executive device for the executive to deal with the Collaborative Learning framework. In this paper, the creator concentrates on the substance administration segment in light of the campus Learning framework. Composing device and review apparatus are critical instruments in this segment. Composing device is utilized by teachers to make, alter, impart and circulate the taking in substance, while review device is utilized by learners to gain access to the substance they plan to take in.

IV. TECHNOLOGY AND ACT OF ASSISTANCE FOR BUILDING CO-LEARNING

A standout amongst the most fascinating requisitions of cloud computing is instructive cloud. The instructive distributed computing can center the force of many workstations on one issue, permitting analysts pursuit and discover models and make disclosures speedier than at any

other time in recent memory. The colleges can likewise open their engineering foundations to private, open segments for research headways. The efficiencies of distributed computing can help schools keep pace with regularly developing asset prerequisites and vigor costs. Scholars need their particular portable mechanisms to interface with yard administrations for training. Working parts are requesting productive access also adaptability when incorporating engineering into their classes. Scientists need moment access to high execution registering administrations, without them obligation of dealing with a huge server and space ranch. The part of distributed computing at college training might as well not be belittled as it can give imperative increases in offering immediate access to an extensive variety of distinctive scholarly assets, research requisitions and instructive apparatuses. Typically, Collaborative Learning in frameworks is created as dispersed requisitions, not constrained to. The structural planning of a Collaborative Learning framework, created as an appropriated requisition, incorporates a customer requisition, a provision server and a database server next to the equipment to help it.

Collaborative-Learning in frameworks can utilize profit from cloud registering utilizing:

Framework: utilize an Collaborative Learning in result on the supplier's framework.

Stage: utilize and create a Collaborative Learning in result in light of the supplier's advancement interface.

Administrations: utilize the Collaborative Learning in result given by the supplier.

Key Benefits of Cloud Based Collaborative Learning:

There are various favorable circumstances when the e-taking (Taking notes is a key part of the research process because it helps you learn, and allows you to see your information in a useful visual way) is executed with the distributed computing engineering, they are:

A. Simplicity

Cooperative Learning clients require not have high end arranged machines to run the Collaborative Learning in provisions. They can run the requisitions from cloud through their PC, portable telephones; tablet PC having least arrangement with web connectivity. Since the information is made and gained entrance to in the cloud, the client require not use more cash for extensive memory for information space in nearby machines. Associations likewise need to pay for every utilization, so it's less expensive and requirement to pay just for the space they require.

B. Enhanced execution

Since the cloud based e-taking in requisitions have the majority of the provisions and techniques in cloud, customer machines don't make issues on execution when they are meeting expectations.

C. Moment programming service

Since the cloud based requisition for Collaborative Learning in runs with the cloud control, the products are

immediately upgraded in cloud source. Thus, dependably collaborative learners get service immediately.

D. Enhanced report design similarity

Since some record configurations and fonts don't open legitimately in some PC's/mobile telephones, the cloud fueled e-taking in provisions don't need to stress over those sorts of issues. As the cloud based Collaborative Learning in provisions open the index from cloud.

E. Profits for people

Students get more points of interest through cloud based Collaborative Learning in. They can take online courses, go to the online exams, get criticism about the courses from teachers, and send their undertakings and assignments through online to their instructors

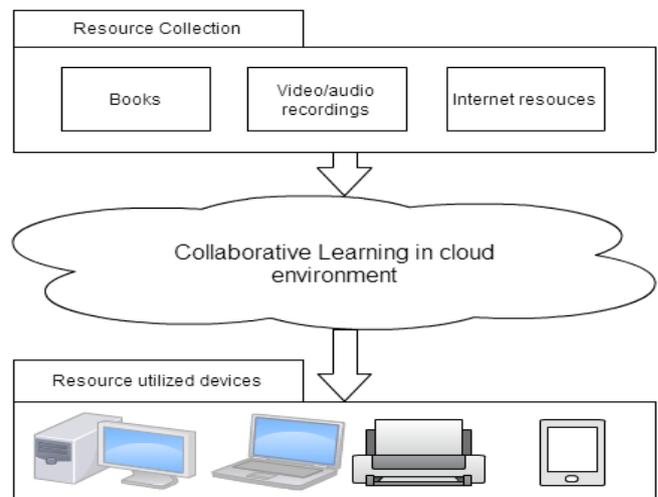


Fig 1: Cloud environment Collaborative-learning structure

F. Profits for instructors

Teachers likewise get various profits over cloud based Collaborative Learning in. Educators have the ability to get ready online tests for understudies, arrangement and make better substance assets for learners through substance administration, survey the tests, homework, and ventures taken by scholars, send the input and correspond with people through online discussions.

G. Information security

A quite huge concern is identified with the information security in light of the fact that both the product and the information are placed on remote servers that can crash or vanish without any extra warnings. Regardless of the possibility that it appears to be not exceptionally sensible, the distributed computing furnishes some significant security profits for people and organizations that are using/developing Collaborative Learning in results.

V. FURTHER RESEARCH AND IMPLICATION

We plan to extend our research by implementing the cloud environment in school, colleges and industry as cloud computing has enormous space in the field of technology. Where large amount of data has to be stored and retrieved for which cloud campus is a boon not only to all entrepreneurs but also to common man.

Suggestions to improve the collaborative learning in cloud are,

- a. The institution should have to have a tie up with few cloud service providers and other foreign universities to advance the level of education.
- b. Workshops should be conducted on cloud and on cloud services.
- c. It should not only a workshop there should be Hands-on-training for students and faculty.
- d. All Educational institution should and must set up a cloud campus.

VI. CONCLUSIONS AND FUTURE WORK

In this paper, Cloud computing as an energizing advancement is a huge elective today's instructive view. Scholars and regulatory work force have the chance to rapidly and financially gain access to different provision stages and assets through the site pages on-interest. This immediately decreases the expense of organizational expenditures and offers all the more effective practical competencies. There will be an online study to gather the obliged information for the utilization of distributed computing in the schools and other legislative or private organizations in the area. This will help us audit the present status and reasonable to assume contemplations to receive the cloud innovation. Starting with the outsourcing of email administration appears alluring. The steadily evacuation of programming permit costs, fittings expenses and upkeep takes separately furnishes incredible adaptability to the university/corporate administration. In this paper we examine a distributed computing based Collaborative Learning. Portray its definition and a few profits. Cloud based instruction will help the understudies, staff, Trainers, Institutions and likewise the learners to a quite high degree and primarily people from provincial parts of the world will get a chance to get the learning imparted by the educator on other some piece of the world. Indeed governments can take activities to execute this framework in schools and universities in future. Thus, if the rate of degradation is taken care of dynamically, the system would then be adaptable to a wider range of real-world scenarios. This remains our area of research for future.

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